

DOCUMENT RESUME

ED 314 997

HE 023 163

AUTHOR Lowther, Malcom A.; And Others
 TITLE Preparing Course Syllabi for Improved Communication.
 INSTITUTION National Center for Research to Improve Postsecondary Teaching and Learning, Ann Arbor, MI.
 SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
 PUB DATE 89
 GRANT G008690010
 NOTE 35p.
 AVAILABLE FROM Program on Curriculum Design, NCRIPAL, 2400 SEB, University of Michigan, Ann Arbor, MI 48109-1259 (\$5.00).
 PUB TYPE Guides - Non-Classroom Use (055)
 EDRS PRICE MF01/PC02 Plus Postage.
 DESCRIPTORS College Faculty; *Communication (Thought Transfer); Course Content; *Course Descriptions; *Curriculum Development; Educational Development; Educational Planning; Guides; Higher Education; Instruction; Instructional Development; Learning; Program Content; Teaching Guides

ABSTRACT

This guide was developed in response to faculty inquiries about how to prepare more effective syllabi. Its content was derived from several sources: discussions with faculty about course planning procedures; interviews with students; reviews of workshops and other literature; and analysis of a large number of syllabi from different disciplines. College faculty use a variety of techniques for communicating course plans and expectations to students, the most commonly used technique being the course outline or syllabus. Syllabi are designed to communicate course information and instructor views of the courses to the student. The syllabus is a very effective tool for improving communication between the instructor and the student, and it serves as an agreement about the purpose and direction of the course. After some suggestions on using the syllabus guide, the guide then provides suggestions for the following 10 syllabus sections: instructor and course; course purpose, goals, and objectives; educational beliefs; content outline; assignments and course calendar; textbooks; supplementary readings; methods of instruction; student feedback and grading procedures; and learning facilities and resources for student. Five appendixes provide a variety of examples. Contains 10 references. (SM)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

ED314997

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

NCRIPTAL

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

This document has been reproduced as
received from the person or organization
originating it.

Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official
OERI position or policy.

Preparing Course Syllabi for Improved Communication

Related publications available from NCRIP TAL's Research Program
on Curriculum Design: Influences and Impacts.

**Planning College Courses:
A Guidebook for the Graduate Teaching Assistant**
(1989)
Michael P. Ryan and Gretchen G. Martens

**Planning Introductory College Courses:
Influences on Faculty**
(1989; in progress)
*Joan S. Stark, Malcolm A. Lowther, Richard J. Bentley, Michael P. Ryan,
Michele Genthon, Gretchen G. Martens, and Patricia A. Wren*

**Reflections on Course Planning:
Faculty and Students Consider Influences and Goals**
(1988)
*Joan S. Stark, Malcolm A. Lowther, Michael P. Ryan, Sally Smith Bomotti,
Michele Genthon, Gretchen G. Martens, and C. Lynne Haven*

**Designing the Learning Plan:
A Review of Research and Theory Related to College Curricula**
(1986)
Joan S. Stark and Malcolm A. Lowther, with assistance from Sally Smith

Other NCRIP TAL research programs include Classroom Teaching
and Learning Strategies, Faculty as a Key Resource, Organizational
Context for Teaching and Learning, and Learning, Teaching, and
Technology

5

Preparing Course Syllabi for Improved Communication

by
**Malcolm A. Lowther
Joar. S. Stark
Gretchen G. Martens**

Research Program on Curriculum Design: Influences and Impacts

The National Center for Research to Improve
Postsecondary Teaching and Learning
Suite 2400, School of Education Building
The University of Michigan
Ann Arbor, Michigan 48109-1259

Your Comments Invited

We wish to make this booklet as helpful as possible and therefore invite your thoughts, experiences, suggestions, and comments.

Please address them to:

Program on Curriculum
c/o NCRIPAL
2400 SEB, The University of Michigan
Ann Arbor, Michigan 48109-1259

The National Center for Research to Improve Postsecondary Teaching and Learning is funded at The University of Michigan by Grant No. G008690010 from the Office of Research of the U.S. Department of Education's Office of Educational Research and Improvement (ED/OERI). The opinions presented hereir. do not necessarily reflect the position or policy of ED/OERI or the Regents of The University of Michigan, and no official endorsement should be inferred.

Copyright © 1989 by the Regents of The University of Michigan
for the National Center for Research to Improve Postsecondary
Teaching and Learning. All rights reserved.

Contents

Introduction	vi
How to Use This Syllabus Guide	vii
1. Basic Information: Instructor and Course	1
2. Course Purpose, Goals, and Objectives	2
3. Educational Beliefs	3
4. Content Outline	6
5. Assignments and Course Calendar	7
6. Textbooks	8
7. Supplementary Readings	9
8. Methods of Instruction	10
9. Student Feedback and Grading Procedures	11
10. Learning Facilities and Resources for Students	12
Appendixes	
A. Examples of Goals and Objectives	13
B. Educational Beliefs	17
C. Alternatives for Sequencing Material	19
D. Rationale for Selecting Content	22
E. Possible Definitions of Disciplines	23
References	24

Introduction

College faculty use a variety of techniques for communicating course plans and expectations to students. The most commonly used technique is the course outline or syllabus. The syllabus serves as a planning device to organize the course and to provide students with information about course content, the instructor's expectations, the methods of instruction and evaluation, and the overall course rationale. When NCRIPAL researchers examined syllabi from different academic fields, we found wide variability in format and content, ranging from one-page listings of student assignments to ten-page documents containing detailed information about course purposes and goals, content, textbooks, assignments, teaching techniques, and the like. Despite this variability, the syllabi were designed to communicate course information and instructor views of the courses to the student.

In discussing courses with students we found they frequently approach them with questions such as "Why do I have to take this course?" "What am I going to learn in it?" "What's in it for me, how does it relate to my interests?" An effective syllabus explains to students the rationale and purpose of the course as well as course content and procedures. Recent research confirms the assumption that students learn more effectively when they understand faculty intentions about course matters. The syllabus is a very effective tool for improving communication between the instructor and the student, and it serves as an agreement about the purpose and direction of the course.

This guide was developed in response to faculty inquiries about how to prepare more effective syllabi. Its content was derived from several sources: discussions with faculty about course planning procedures, interviews with students, reviews of workshops and other literature, and analysis of a large number of syllabi from different disciplines.

How to Use This Syllabus Guide

This guide can be used in a number of ways. New instructors can use it as a checklist of what might be included, or it can be used by groups of faculty from different disciplines to stimulate discussion about improving communication with students. It can also help an instructor who is revising existing syllabi to determine if relevant information has been omitted.

We do not suggest that every item listed be included in the syllabus, although more comprehensive information is preferable to a brief outline, nor do we have a model syllabus in mind. We do suggest that it be sufficiently flexible to accommodate unanticipated student differences. If necessary or desirable, it can be supplemented later in the course. We have marked with an asterisk the items that infrequently appear in syllabi that seem important in our judgment to communicate to students.

The guide is organized into the following ten sections, each of which is introduced by a short statement. These can be included and ordered in the syllabus as desired.

1. Basic Information: Instructor and Course
2. Course Purpose, Goals, and Objectives
3. Educational Beliefs
4. Content Outline
5. Assignments and Course Calendar
6. Textbooks
7. Supplementary Readings
8. Methods of Instruction
9. Student Feedback and Grading Procedures
10. Learning Facilities and Resources for Students

A number of the items included may seem obvious to the experienced instructor; we found, however, they were often omitted in the syllabi examined. As the suggestions expressed here are open to verification, we encourage faculty to experiment with longer and shorter syllabi and evaluate the effect on students. We believe the use of this guide should assist faculty in improving course communication with students as well as possibly influencing course

Basic Information: Instructor and Course

An effective syllabus should provide the student with basic information about both the instructor and the course. Not only does this information establish a tone for the course, it illustrates the instructor's commitment to the student's progress.

Increasingly, instructors use electronic communication, including computer conferencing, to give students easy access to faculty. If this is encouraged, describe the procedures in the syllabus as well as in class.

While information about the course may be found in the college catalog or course schedule, it may bear repeating thus assuring all students have the same information.

Instructor Information

- Instructor's full name, title
- Office location and telephone number
- Office hours*
- Home telephone
- Electronic address and communication procedures
- Instructor's accessibility*
- Teaching assistant name(s), phone(s), office address(es)

Course Information

- Course title/number/credits
- Class meeting times and place
- Catalog description
- Prerequisites for the course
- Students for whom the course is intended

*Items seldom included, but important to communicate

Course Purpose, Goals, and Objectives

In our review of syllabi, we found wide differences in how instructors describe course purposes and goals. Some state their goals in considerable detail while others make no reference whatsoever to them. We believe a statement about the course rationale can contribute to effective communication between the instructor and the student. Students, particularly in the first two years, may not understand why they must take a certain course or how it will contribute to their overall educational experience. Also, they often bring their own goals to a course and assume compatibility between their goals and those of the instructor. A description of the course purpose in the syllabus can clarify expectations for students as it helps them understand why they are in the class and how it fits into their educational plans. (See Appendix A for examples of course goal statements.)

- Course rationale statement*
- General course goals*
- Specific objectives
- Relationship of course to student academic development
- Relationship of course to program goals
- Relationship of course to general education requirements
- Relationship of course to institutional mission

*Items seldom included, but important to communicate

Educational Beliefs

Faculty bring many different beliefs to a course: beliefs about students, beliefs about educational purpose, and beliefs about their teaching role.

Beliefs about students may strongly influence the course planning and teaching behaviors of instructors; thus, some faculty find it useful to describe their beliefs and assumptions. By doing so, students come to understand the instructor's expectations.

Beliefs About Students*

- Student capabilities
- Prior preparation
- Personal interests
- Effort anticipated
- Comprehension of time or personal pressures
- Acceptance of students' different learning styles

*Item seldom included, but important to communicate

EDUCATIONAL BELIEFS

Faculty also possess a number of beliefs about the purpose of education and how their discipline or course fits into that belief system. We have identified eight commonly held educational beliefs with which faculty might identify. (See Appendix B for an expanded description of each item.)

Beliefs About Educational Purpose*

- The purpose of education is to make the world a better place for all of us. (Social Change)
- The purpose of education is to teach students how to think effectively. (Effective Thinking)
- Whatever the curriculum, effective education requires that instructors attend closely to instructional processes. (Systematic Instruction)
- The college mission and available resources should determine the educational program. (Pragmatic Considerations)
- Education should involve students in a series of personally enriching experiences. (Personal Enrichment)
- Education should emphasize the great products and discoveries of the human mind. (Great Ideas/Traditional Concepts)
- A fundamental role of education is to help students achieve their vocational goals. (Vocational Goals)
- Education should help students clarify their beliefs and values. (Value Development)

*Item seldom included, but important to communicate

Faculty can identify with a number of different teaching roles, depending on the type of course and teaching methods used. During the term or semester, teachers enact some or all of the teaching roles listed at right. You may wish to specify which of these roles suits your purpose in class.

Beliefs About Teaching Role*

- Teacher as expert
- Teacher as formal authority
- Teacher as socializing agent
- Teacher as facilitator
- Teacher as role model
- Teacher as resource consultant
- Teacher as coach
- Teacher as counselor

*Item seldom included, but important to communicate.

Content Outline

Some instructors outline the course content in considerable detail, listing a topic for each class session and specifying the expected reading for that particular class. Others provide only a listing of broad topics to be covered during the semester. One dilemma of providing a detailed content outline is that the course structure may be seen as inflexible and the instructor as unable to accommodate student needs and interests. On the other hand, detailed outlines let the instructor clarify relationships for students as well as provide them with a course structure. Instructors might consider providing a general topic outline the first class session, and a revised, detailed outline that reflects student interests in later sessions.

Instructors may also choose to describe the rationale underlying their choice and sequence of content. We have found that content selection and sequencing decisions are strongly related to academic disciplines. By describing the rationale underlying content and sequencing decisions, students may more effectively grasp the intellectual flow of the course and its relationship to the academic field in general.

- Topic outline for course
- Sequencing of course content* (see Appendix C)
- Rationale for course content* (see Appendix D)
- Definition of the discipline (see Appendix E)
- Substantive component (assumptions of the discipline)
- Syntactical component (mode of inquiry of the discipline)
- Conjunctive component (the relationship of the discipline to other fields)
- Symbolic component (the language of the discipline)
- Skill component (the skills to be applied)

*Items seldom included, but important to communicate

Assignments and Course Calendar

When they receive a syllabus, many students look immediately at the list of assignments since these represent their workload. Students frequently comment that instructors describe neither expectations for work nor the relationship of assignments to course purposes in enough detail. Including this information in the syllabus helps students understand their academic responsibilities for the semester. It also reduces unwelcome surprises and helps students understand your assignments. Some faculty may wish to meet with the class several times before specifying all of the course assignments. In this way, student characteristics may be incorporated into the course planning. The course calendar lets both the instructor and the student plan the semester's work.

Student Assignments and Purpose

- Readings
- Papers
- Required documentation style, if any
- Tests/quizzes
- Projects
- Laboratories
- Clinics
- Field experiences
- Relationship of course goals to assignments*
- Relationship of specific objectives to assignments*

Calendar

- Dates for major assignments
- Dates for exams/quizzes
- Dates for projects
- Dates for vacations
- Dates for field trips or special activities

*Items seldom included, but important to communicate.

Textbooks

After tuition, textbooks may represent the greatest academic cost to students. Instructors find textbooks important not only as sources of information but as aids to help students organize information. By describing the text in relation to course purpose, the instructor communicates to the student its role in the instructional process.

- Title(s)
- Author(s)
- Edition
- Publisher
- Where textbook is available
- Estimated price of textbook
- Availability of textbook in library or on reserve
- Reason text book was chosen*

*Item seldom included, but important to communicate.

Supplementary Readings

Many instructors find it necessary to supplement the textbook with additional readings for a number of reasons. Readings may be more contemporary than textbooks, they may provide additional depth of coverage for certain topics, they may acquaint students with original research, and they may provide information about local issues or topics. Instructors may wish to indicate how they will use the text and supplementary readings (i.e., as a basis for lectures, as supplements to lectures, or as a basis for examinations).

- Required readings
- Recommended readings
- Location of supplementary readings
- Course pack availability
- Readings keyed to student abilities/interests
- Availability of instructor's library

Methods of Instruction

Faculty may wish to describe their teaching techniques, indicating their relation to course goals and student learning. By providing such a statement, teachers help students to become aware of their responsibilities as learners. Will they be actively engaged in the teaching process or will their role be passive? Students may also see that the methods used by their instructor foster certain objectives such as increasing student independence or opening channels of student-faculty communication.

- Description of instructional techniques*
- Rationale for instructional techniques*
- Description of class format (lecture, lecture/discussion, seminar, etc.)
- How techniques foster active involvement*
- How techniques include two-way communication*
- How techniques foster student independence*
- How techniques achieve other specified goals*

Student Feedback and Grading Procedures

Students are always concerned about how they will be evaluated and graded. Descriptions of these procedures will reduce ambiguity about the grading process. Also, instructors might describe the kind of learning indicators they use as a basis for evaluation.

Feedback to Students

- Grading system*
- Learning expectations*
- Non-grading feedback
- Policies on assignments/ tests/makeups*
- Policies on attendance/ incompletes
- Electronic conferencing feedback
- Extra credit policies

Indicators of Student Learning

- Quizzes/tests
- Papers
- Attendance
- Face/body language
- Class participation, questions
- Discussions after class
- Office visits

Learning Facilities and Resources for Students

Many students, even those well along in their college programs, may not be aware of available campus resources. Sometimes students need to be instructed in the use of these resources and how to facilitate educational progress in general or in a specific course.

- Library policies
- Learning-assistance policies
- Laboratory policies
- Computer availability and policies
- Reasons for using resources*

Examples of Goals and Objectives

The following examples of goals and objectives were taken from syllabi of instructors teaching introductory college courses.

English Composition

The course objectives are to help students:

- a. Acquire habits of accuracy and clarity in composing sentences and paragraphs*
- b. Understand and demonstrate the organizational concepts of focus and development in writing essays*
- c. Establish familiarity with the narrative, descriptive, expository, and argumentative forms of writing*
- d. Develop a facility for the critical reading and thinking necessary for college work*

English Literature

My goal as an instructor is to expose you to a wide variety of some of the best literature ever written, to help you read it accurately, to discuss it with you in ways that you find relevant, and to stimulate fruitful speculation on the interpretation of human experience offered us in the literature. I hope, thereby, to increase your interest in literature as a way of enriching your own experience of life.

American History

By the end of the course you should have developed your ability to think clearly and critically, to ask significant questions, to read and interpret historical materials intelligently, and to express your ideas in a logical, concise manner.

Sociology

The course has four central goals. The first is to provide a basic knowledge about aspects of contemporary life in major industrial societies, including Britain, Sweden, France, Japan, and the Soviet Union. Second, the course will be concerned throughout with the usefulness of the concept of "modern society." Is there such a form, toward which all industrial societies are converging? Or are there simply various and diverse industrial societies? Third, as we examine similarities and differences among specific societies, skill in comparative analysis should be developed. And finally, since throughout the course we also will be asking how each of the societies, and all of them, differ from--or are similar to--the United States, increased understanding of our own society will be achieved.

Mathematics

The student is expected to develop:

- [] *An understanding of the properties of the real number system*
- [] *Facility with the manipulative aspects of operations on polynomials and rational expressions*
- [] *An understanding of the ideas of functions and graphing*
- [] *Ability to solve systems of linear equations, systems of inequalities, and quadratic equations*
- [] *Competence in appropriate problem-solving skills, and an appreciation of a variety of approaches to problem solving*

Biology

Course goals:

- 1. To show: similarity among all living things...the interrelationships of organisms; their need for a healthy environment and our concern to maintain it.*
- 2. To provide: basic lab skills; background for advanced courses.*
- 3. To develop curiosity and interest in reading science articles.*

Nursing

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

- [] Identify issues and trends as they pertain to nursing's position as a health care discipline*
- [] Identify the historical development of nursing*
- [] Define the roles and responsibilities of the professional nurse*
- [] Recognize roles of other health care professionals in the community*
- [] Discuss the impact of current nursing issues and trends upon nursing practice*

Business

The purpose of this class is to introduce you to the many facets of the free enterprise system and of the businesses that operate within it. Since it is the first course in business, Introduction to Business is not going to teach you "everything you always wanted to know about business but were afraid to ask." It is anticipated, though, that through your experiences in this course, you will gain a better understanding of what private enterprise is all about and what is included in each of the several academic areas of study in business at institutions of higher learning such as the one you are attending. It is hoped that this improved understanding will increase your appreciation of the free enterprise system and will assist you in planning both your academic program and future career.

Educational Beliefs

(Modified from Eisner & Valance, 1974)

Social Change

In general, the purpose of education is to make the world a better place for all of us. Students must be taught to understand that they play a key role in attaining this goal. To do this, I organize my course to relate its content to contemporary social issues. By studying content which reflects real life situations, students learn to adapt to a changing society and to intervene where necessary.

Effective Thinking

The main purpose of education is to teach students how to think effectively. As they interact with course content, students must learn general intellectual skills such as observing, classifying, analyzing, and synthesizing. Such skills, once acquired, can transfer to other situations. In this way, students gain intellectual autonomy.

Systematic Instruction

Whatever the specific course purpose, effective teaching demands that instructors attend closely to instructional processes. Goals and objectives should be clearly specified and course procedures should be systematically designed to achieve the objectives. In part, my success as an instructor depends on the degree to which students achieve the objectives by the end of the course.

Pragmatic Considerations

The purposes of education and the types of ideas and skills that students are to learn are determined for the most part by the college mission and available resources. Within these parameters, I try to help students see the value of education. I would change significantly the way I arrange the content of my course if I had more flexibility.

Personal Enrichment

I organize my course so that students have a series of personally enriching experiences. To meet this broad objective, I select content which allows students to discover themselves as unique individuals and, thus, acquire personal autonomy. I discuss appropriate activities and content with students in an effort to individualize the course.

Great Ideas/Traditional Concepts

In my judgment, education should emphasize the great products and discoveries of the human mind. Thus, I select content from my field to cover the major ideas and concepts that important thinkers in the discipline have illuminated. I consider my teaching successful if students are able to demonstrate both breadth and depth of knowledge in my field.

Vocational Goals

Education should provide students with knowledge and skills that enable them to earn a living and contribute to society's production. I believe a fundamental role for me as an instructor is to help students achieve their vocational goals.

Value Development

Whatever the curriculum, it should help students clarify their beliefs and values and thus achieve commitment and dedication to guide their lives. For me, the development of values is an educational outcome as important as acquisition of subject knowledge in the field I teach.

Alternatives for Sequencing Material

(Modified from Posner & Strike, 1976)

Structurally-Based Sequence

In planning my course, I organize the material so that it is consistent with the way relationships in my field occur or exist in the world. For example, I may use patterns such as: spatial relationships, chronological relationships, physical relationships, or other natural occurrences.

Conceptually-Based Sequence

In planning my course, I generally organize units around major ideas or concepts of the field so that understanding of these concepts evolves in a manner that represents important relationships. I am likely to organize material in patterns such as one of the following: (1) relationships of classes and groups of objects or phenomena; (2) relationships of theory to application of theory, of rule to example, or evidence to conclusion; (3) relationships that proceed from simplest ideas to ideas of more precision, complexity, and/or abstractness; (4) relationships of logical sequence in which one idea is necessary to comprehend the next.

Knowledge Creation Sequence

In planning my course, I generally organize material according to the way in which knowledge has been created in my field. I tend to structure the course around the processes of generating, discovering, or verifying knowledge. Therefore, I typically include as primary foci of the course topics such as: (1) ways of drawing valid inferences and (2) ways in which scholars in my field discover relationships.

Learning-Based Sequence

In planning my course, I generally organize the material according to what I know about how students learn. For example, I may organize material according to one or more principles such as: (1) students should first learn skills that are likely to be useful in later learning; (2) students should encounter familiar ideas and simple phenomena before those that are more unfamiliar and complex; (3) students should understand an idea or concept before attempting to interpret and use it; or (4) students should encounter material geared to their readiness to learn.

Knowledge Utilization Sequence

In planning my courses, I organize the material in ways that will help students use it in social, personal, or career settings. Thus, I create problem-solving situations and encourage students to take responsibility for solving real life problems in a logical and organized fashion. Since it is not always possible to know the specific problems students will face, or the skills they will need, I try to select course material so that students encounter broad problem-solving strategies that may be useful in their lives and careers.

Pragmatic Sequence

In planning my course, I organize materials to take advantage of opportunities and minimize existing constraints. A variety of opportunities for learning exist on campus and in the community but in planning a course the instructor must attend to such factors as time of year, length of the term, spacing of vacations, type of classrooms and laboratories available, class size, and the beliefs and motivations of the students. As a result of these opportunities and constraints, the way I arrange the content of my course varies considerably from time to time.

Vocational Instruction

In planning my course, I organize materials in ways that will help students attain knowledge and skills needed in their chosen careers. My familiarity with the practice field and the needs of potential employers provides important guidance in arranging course content.

Value Development

In planning my course, I organize material in ways that will help students clarify and become committed to values and beliefs. I tend to structure the course around issues such as dilemmas, ethical problems, or value dimensions that I know have implications for students as they try to lead a fulfilling and exemplary life.

Rationale for Selecting Content

- Students find the material enjoyable to learn
- The material is an important or fundamental concept in my discipline
- Students readily learn the materials
- The material is useful in solving problems or making decisions
- The material helps students to integrate their ideas into a cumulative knowledge base
- The material is based on or related to research or inquiry in my discipline
- The material stimulates students in their search for meaning
- The material encourages students to do more investigation on their own
- The material interrelates fundamental and lower level concepts into broader abstractions and principles

Possible Definitions of Disciplines

(Modified from Dressel & Marcus, 1982)

- A mode of inquiry
- An interrelated set of interests and values
- A set of skills to be mastered
- A set of skills to be applied
- A set of objects or phenomena that humans have tried to explain
- A group of individuals who share common interest in trying to understand the world
- An organized body of knowledge
- A set of interrelated concepts and operations
- Other (list) _____

REFERENCES

- Dressel, P., & Marcus, D. (1982).
Teaching and learning in college.
San Francisco: Jossey-Bass.
- Eisner, E. W., & Valance, E. C. (Eds.) (1974).
Conflicting concepts of curriculum. Berkeley, CA:
McCutchan Press.
- Posner, G. J., & Strike, K. A. (1976).
"A categorization scheme for principles of sequencing content."
Review of Higher Education, 46, 665-689.

