4 Preparing and Designing a Course

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Deciding on Course Objectives

Planning is essential for effective teaching. Berliner (1988) reported that a concern for effective planning and preparation was one of the factors constantly found in the behavior of expert teachers. This seems sensible because most people would agree that planning for any event will improve the results. Educational planning generally follows a familiar three part format of setting goals and objectives, determining necessary activities, and evaluating the students' ability to meet those goals and objectives. For a new instructor, often with limited time to prepare, this might seem to be an overwhelming task. However, there are a number of resources available to assist in the planning process. Begin by reviewing the college catalog and the department course description. Then talk to previous instructors and ask for copies of their syllabi and the texts they used, as well as information about what they might change if they had to teach the course again.

The first step in the planning process is to establish appropriate goals and objectives for the course. Goals, as they are usually defined in education, are general statements about the aims for the course and the student (Lortie, 1975). Put another way, teachers must determine why they are teaching the course, and what they would like the student to be able to do, or to know after completing the course. These goals can be either student or content centered, although goals are more frequently based on the content. These goals are built around the body of knowledge that defines a discipline (Tyler, 1949). When doing this type of planning teachers routinely ask:

- What knowledge and/or skills should students have about the subject as a result of the course?
- What subject matter must be covered for the course to be considered successful?
- What is the breadth and depth of the coverage of that content that the course can hope to achieve?

It is sometimes useful, however, to ask student centered questions about course goals. These types of questions focus on student outcomes instead of teacher input. Two examples of student-centered questions are:

- How will students use the knowledge or skills learned in this class in their personal and professional lives?
- What will the student be able to do at the end of the class that they cannot do now?

Course goals should address both types of questions. To assist in planning at this stage there are several specific questions to keep in mind. They are:

- Where does this course fit in the curriculum? Is it a prerequisite that requires students to master certain content for success in later courses?
- What skills and knowledge are the students expected to bring to the course? What is the average level of student performance?
- How will the students' behavior change through their participation in the course?
- How can the course be subdivided into instructional units?
- What types of learning experiences should the students have?
- How will the students be evaluated?

Focusing on these questions and using all the available resources as a guide will provide the necessary structure during this first phase of the planning process. However, these goals only provide a general sense of direction; it is the instructional objectives which will detail the specific changes in the students' behavior that will occur.

Often compared to maps, instructional objectives provide the teacher and student with definite reference points to monitor the students' growth. Objectives are written after the course has been divided into a series of interrelated units. These objectives are usually written in the form of behavioral objectives which have three components:

- Behavior - what the student will be able to do, usually in the form of an action verb such as identify, draw, list, compare, etc.
- Testing - the conditions under which the behavior is expected to occur.

- Standard - the minimum performance level which will be accepted.

A typical behavioral objective might be:
Given a complete sentence the student will be able to identify the simple subject and simple predicate.

Clearly written instructional objectives helps keep lessons focused on the overall goals of the course. They identify when and how learning should be measured, and provide information on students' progress.

Bloom (1956) created a taxonomy based upon how student abilities are correlated to their learning. It is useful in writing behavioral objectives because it provides a framework to ensure that students are presented with a wide range of tasks from the simple to the complex. Bloom described six levels which are:

- Knowledge - memorization and recall of content material
- Comprehension - paraphrasing or interpretation of material
- Application - applying material to practical or novel situations
- Analysis - sorting the material into its basic parts and detailing how the parts differ
- Synthesis - merging parts from several areas to create a new pattern.
- Evaluation - judging the value of the work.

Too often course objectives tend to concentrate student learning on the first two levels. Although these levels are quite useful in determining students' progress during a lesson or lessons, they provide little information about the students ability to use the knowledge and skills being acquired. Well thought out course objectives tend to be written more globally than objectives created for the lessons that make up a unit or course. Although both describe student ability to perform designated tasks, course objectives are less concerned with recall of facts, and focus on what the students are able to do with those facts. Careful attention to utilizing Bloom's taxonomy when writing course objectives will ensure that students demonstrate both lower and higher levels of learning. This is a very abbreviated presentation of a very complex process. Mastery of the planning process will take time and experience, but this should provide a framework within which a course can successfully be developed.

Preparing a Syllabus

After course planning is completed, a syllabus is prepared for the students. It is a formal statement of the purpose the course fulfills, what students will be expected to do, and how the students will be evaluated. The university requires that a syllabus must be presented to the students at the beginning of the course, and it is an excellent opportunity to communicate important information about the routine matters of the class. The syllabus also informs students of content they will cover and skills they will be expected to acquire. It also describes when and how they will be evaluated during the course. Also, because it contains an outline of the material to be covered, it helps to demonstrate how the various units in the course are connected. A well-written syllabus should contain basic information such as:

- The instructor's name, office location, office hours, email, and telephone number (some instructors include a home number but this is strictly optional).
- Course title, course number, semester, and year.
- Location and times of class meetings.
- The Ball State Policy for Students with Disabilities.

The following statement is to be put in each syllabus and read at some point during the first week of class:

If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible. My office location and hours are …
This information is usually found at the beginning of the document. In addition to this basic information, the syllabus should include:

Statement of the course objectives. These are based on the goals and objectives produced during the planning for the course. The wording of the objectives should detail student outcomes rather than what the instructor intends to do. Not every objective and goal can be included in this section, but students should be able to gain a clear idea of what they will be expected to know at the end of the semester.

A brief description of the basic teaching methods and activities the students will experience and their implications for students. Make clear what students are expected to do in discussion groups, during audiovisual presentations, fieldwork, cooperative assignments, etc. It is helpful with undergraduates to provide some estimation of time required for fieldwork, lab projects, writing assignments, etc. since the students probably have not experienced them before. In addition, a detailed explanation of the format required for completed course procedures for papers, homework assignments, and other required activities will reduce student confusion and last minute questions.

All required texts and any recommended texts. These should be listed in the appropriate bibliographic format. Additional readings and workbooks should be described along with where they may be found. If the student will need to provide other materials such as art supplies, audio or video tapes, dissecting kits, calculators, etc., they should be listed in this section.

Grading procedures and scales. List all the activities that will be graded. Specify the type of activity (project, quiz, exam, homework assignment, paper, lab work, class participation), how each will be graded, and the percentage of the grade each one represents. Also explain the procedures by which the final grade will be determined. Particular attention should be given to group activities which involve a grade. It is important to clearly state how grades will be assigned for the project and how that might affect an individual in the group. This section might also contain examples of the types of questions commonly used in the quizzes and exams for the course. If unannounced quizzes are to be used in the course, the students should be told about them in this section.

Policies about class absence, lateness, reporting illnesses, requesting extensions, missed exams or late papers should be expressed in clear, nonthreatening form. It is a good idea to go on record with specific, strong policies which can be informally tempered at a later date, when circumstances so warrant. To avoid problems related to cheating or plagiarism, the types of source materials and the extent of collaboration permitted on homework and other assignments should be clearly specified.

The schedule of classes, with meeting dates, topics, and appropriate readings; deadlines for papers, projects, and assignments; school holidays; and test dates. It is useful to include information about how students might budget their time, especially for lengthy or large assignments. Many undergraduates have not had experience with such projects and assignments and will find this information very useful.

A syllabus with this much material tends to be somewhat lengthy, but promotes greater student learning. It is important to review the final copy for typos and mistakes and, if possible, have another person proof it. It is difficult to require students to turn in professional quality materials when their syllabus contains errors. The key is to be specific, be accurate, and then to stick to the syllabus. If changes do have to be made, be sure that students are given that information in writing; too much ambiguity and confusion can result from half-remembered statements made during class.

Asking other members of the department to see their syllabi can provide a rich source of ideas. Although each syllabus should be specific to the instructors' course goals, there is no need to reinvent the wheel. Much of the syllabi will be very similar since everyone has had to solve many of the same problems. Many departments require instructors to keep a copy of their syllabi on file in the department office and this might prove to be a good place to start when preparing a course.

Team Teaching

The term team teaching can be used to describe a number of different teaching situations. Basically it refers to any situation in which teachers share a course or a group of students. Although the general issues faced by teaching teams are similar, the responses required of each situation are somewhat unique. Three basic types of team teaching most often found at the university level will be presented with specific guidelines for creating a successful course. The three most common team teaching arrangements are:

1 – A professor is responsible for instruction of a very large class, and one or more graduate assistants are responsible for small subsections of the class. These subsections often provide the hands-on laboratory experiences required of the course. In this type of teaming situation, the professor creates the syllabus

and is responsible for the students overall grade. The graduate assistants usually evaluate the students' lab work, and often assist in grading exams. Students often find the graduate students easier to approach, and therefore bring a number of questions and requests to them. To avoid problems this arrangement might create, it is critical that everyone involved in the team has a clear understanding of the lines of authority for the course. It is also important that each member of the team be sure of his or her individual responsibilities and meet them in a timely manner. For this reason a time line should be created which all members of the team can then follow.

The texts and reading assignments, as well as any students activities, are usually selected by the professor, but discussed or presented in the smaller subsections by the graduate assistants. It is important that every member of the team knows what to emphasize within each assignment. Short, frequent meetings are often needed to make sure that each subsection is still on schedule and students are getting a common learning experience.

2 – Two instructors share a group of students and are equally responsible for giving grades and assignments. In this situation the instructors have equal status in the classroom and are often peers who are responsible for combining two disciplines with team teaching approach. In this situation, the team members face slightly different issues. They must be able to agree on:

- the manner in which the content and their teaching is to be combined.
- course goals and student objectives and any texts and materials to be used.
- a time line of lessons and activities which clarifies team members responsibilities.
- how and by whom students will be evaluated.

If this teaming situation is to be successful, each of the members has to be prepared to openly address their concerns about the course. It is often easier for a team member to sit back and hope that something will get done, or think that he or she can sneak it in within the parameters of another lesson, but it seldom happens unless it was discussed and in the plan. Successful teams quickly find out that they must address their concerns before the lesson is presented. Conflict is expected--not sought out, not avoided either. Team members recognize that cooperation, although sometimes difficult, allows students to recognize how the content is interrelated.

3 – Two or more instructors share a course, but have different students in the course. In this situation, each instructor is responsible only for his or her students and course, but recognizes that every student who takes this course is expected to know essentially the same content and possess the same skills after taking the course. In this instance, there is less need to use identical texts, share time lines, or employ similar evaluation instruments. However, it is recognized that it is much easier to ensure that students share equal knowledge and/or skills at the end of the course when there are commonalties across each of the sections of the course. For this reason, it is helpful if all the instructors responsible for the course meet prior to the beginning of the semester and at the end of the semester to share syllabi and discuss the course. Again, open and honest dialogue is required. If the process is to work, the team members cannot go to their classrooms and completely ignore the wishes of the group.

Team teaching can be very powerful when done well, but it takes considerable work to make sure that everyone on the team is working together for the students' benefit. When on a team, one must make sure that they speak for their ideas and work for the team.

Selecting Course Materials

College courses tend to rely on readings, either texts or supplemental materials, as the primary method for presenting content. It is critical that all reading material be read prior to assigning it to the students. This advice seems so basic as to be ridiculous. However, there are a number of tasks faced by instructors when teaching a course for the first time. Sometimes, because of time constraints or team teaching requirements, it is necessary to use readings selected by someone else. Finding time to read, thoroughly, all the material can be overwhelming. There is no adequate substitute for taking the time to do the necessary prereading. By becoming familiar with all reading material, one is better able to accurately identify how much time to devote to each section. This will prove helpful when creating the calendar for the syllabus.

When one has to adjust the calendar too often, it is disruptive for the students. Additionally, a thorough pre-reading highlights potential problems or controversial issues that will need to be addressed in class. Finally, it is important to have a solid knowledge of the reading material when constructing test questions and grading essay exams.

There are several issues to consider when selecting reading material for a course. They are:

- Content - First and foremost the book must be accurate. It should provide coverage of much of the important content to be covered in the class.
- Reading level - It is also important to consider the abilities and interests of the student. It is important to challenge the students' reading ability, but not overwhelm them with material they are incapable of understanding. Although one might expect better reading skills from juniors and seniors, it is difficult to identify any set reading level for any group of students. Most classes will have students with a wide range of abilities. It is important to talk to other members in the department when considering reading material. Their experiences can assist in selecting readings that prove challenging, but comprehensible.
- The readability of the text is important also. It should also provide clear explanations of complex material. The examples should be appropriate to explain the concept under discussion. The chapters should be logically organized, and of manageable length. The text should have features to assist the students, such as chapter outlines, focus questions, bold type for important content, and a list of terms and definitions.
- Amount of Reading - In addition to the reading difficulty of the material, the amount is also important. Again, it is important to challenge the students, but not overwhelm them. Seeking advice from experienced members of the department is often the best way to make appropriate decisions concerning the amount of reading to assign.
- Costs - Although not a critical factor when selecting reading material, the cost should be considered. One means of helping students control their costs, is to put material on reserve in the library, or suggest that students share material.

In addition to texts and supplemental readings, there are other educational materials that can be used to strengthen a course. Two of them are:

- Media and Visual Materials - The library has a number of films, videotapes, audiotapes, filmstrips, and overheads that provide an effective alternative to reading or lecture. The best way to discover what is available and how one accesses it is to visit the Educational Resources Department in the basement of the library. In addition, instructional sessions on how to use the Ball State VIS system are presented throughout the year and very useful in helping to master the system.
- Microcomputers - With the growth and development of educational computer programs, consideration should be given to electronic materials. Every student has access to a number of computer labs located in sites across campus. In addition, each student has, or can obtain, an Outlook account that gives them access to the internet. In addition, it is important to note that the Ball State campus is now wireless.

Special Concerns for Introductory Classes

Introductory courses often present instructors with unique challenges. The classes are often larger than upper level classes. The students usually have a wide range of prior instruction in the content area. In these circumstances, it is often difficult to select course goals and objectives to meet the needs of all the students. Some will feel the material to be too difficult and the presentations too hurried to be of real value. Others will complain that they learned nothing new, and that the course was a waste of their time and money. There are some basic guidelines that might prove useful when faced with designing an introductory course.

- Utilize a variety of different instructional methods. Because of the amount of material that is often covered in an introductory course, it is tempting to utilize direct instruction, lectures, to get everything presented. Although it is true that direct instruction is the most efficient means to ensure coverage, for many students it is not the best method for them to learn or remember the information covered. Introductory courses have a student population with a wider range of abilities and interests. This requires the instructor to

utilize a number of different instructional methods to address the needs of the students. Increased use of media and different instructional methods, when carefully chosen, will allow the same coverage while meeting more students needs. For examples of the types of methods available, consult Chapter 6, Teaching Methods, in this text. Referencing that chapter will provide the Teaching Methods information needed to design lessons that will benefit all the students.

- Do not lower the standards for the course. The goals and objectives for the course ensure that the students obtain the skills and knowledge necessary to be successful in future courses. Keep in mind that students who are having difficulty are not slow, or unable to learn, only struggling with unfamiliar content. They will not benefit in the long run from exposure to less content. They do not need the course slowed down, but they do require a wider variety of examples and activities. One characteristic of expert teachers is that they do not lower their expectations for student learning, but keep presenting students with alternate approaches and explanations to help them understand unfamiliar material.
- Do not rely on fixed-choice exams. It is tempting to use multiple choice and true/false tests in introductory courses, especially in the larger sections. This format does little to prepare the student for the thinking and writing skills needed for success in upper level classes. Allowing students to write, on both exams and written assignments, provides opportunities for them to work on the application and synthesis level objectives of the course.
- Assess student progress more frequently. Short assignments and frequent quizzes will provide students with clear indications of how they are progressing in the course, and it also provides valuable information about potential problems with the material before they become critical. For the same reason, it is important to ask questions during the class. It highlights important material, requires them to be attentive during class, and provides information about how well they understand the material. It is also useful to collect the class notes occasionally for the same purpose.

While preparing the class syllabus and materials, it is often helpful to talk with more experienced faculty to determine the students' general entry level skills and typical interest in the subject. Although it is not advisable to simply recreate a past course, such information will assist in writing the course goals and objectives.

Major courses tend to be conceived and designed as a part of a larger complete presentation of disciplinary knowledge. As such the course goals are to prepare students for further courses in the discipline. The goals in introductory courses are more finite, recognizing that many of the students will not pursue further studies in this area. Also, by the time students are able to concentrate on upper level courses in their major, they are more familiar with the language and methods of the discipline and are often more motivated to make connections between what they are learning in the course to their past courses.

Introductory courses do, then, to be more challenging, but they often provide their own rare reward. It is not uncommon for students unfamiliar with a discipline to discover an interest in it during such courses. There are a number of students who can point to such courses as the reason they eventually majored in that content area. In such cases, the extra work is worth the dividends.

Prerequisites

A different sort of problem is posed by the course that has prerequisites for admission. Prior to planning any course, it is important to check the university undergraduate catalogue to see if there are prerequisites. If the course in question is a prerequisite for other courses, then it is important in the planning process to ensure that all the content the students will need in later courses is covered. Again, talking to colleagues who are teaching the follow-up courses is the best method to determine what needs to be presented.

On the other hand, if the course does have a prerequisite, then efforts should be made to obtain the syllabi from any required courses. This information is important if one is to establish realistic course goals and objectives. Prerequisites provide clear benchmarks about what the students can be expected to know and be able to do. It has been stated that time is the most precious resource that a teacher has completely under his or her control. It would be wasteful to use any of the already limited instruction

time repeating information that the students already had received in earlier classes.

Keeping Class Records

Record keeping is an essential role of teachers. Unfortunately, the time and effort required to maintain accurate and useful records is too often underestimated. There are several basic questions that need to be addressed at the beginning of each semester.

What format will be used to maintain the records? The traditional grade book is still used by many faculty and is available from the department. The grade book consists of pages with boxes for recording relevant information. Each instructor tends to create highly individual systems for the grade book to meet the particular needs of each course.

In addition, the university provides an electronic class record systems, Blackboard, which is accessible through the instructor's Outlook account, and a web-based grade book. Once access is gained to the system, it provides instructions that make it relatively easy to learn. In addition, tutorial sessions on using Blackboard are offered several times each semester by the Office of Teaching and Learning Advancement. The primary advantages of this system are that students have 24-hour access to their current grade and instructors have the ability to set up discussion sessions and email students collectively or individually. And finally, the web gradebook can total the students' scores and thus minimizes mathematical errors and final grades can be submitted directly from gradebook to the Registrar. Some faculty members are reluctant to rely solely on the computer for fear that it fail at some critical moment, or a glitch will cause critical records to be lost. For that reason, many teachers make sure that they print out copies of the electronic gradebook frequently.

What information will need to be recorded? This question is answered by the evaluation procedures established during the initial course planning. It usually includes, but is not limited to, attendance, graded class and homework, quizzes and tests, and project grades. Regardless of the information maintained, it is critical that it be accurate and entered in a timely manner.

There are several additional types of record keeping that can be useful in creating a positive learning atmosphere. While assigned seating is not the norm in college classroom, some instructors like to maintain a seating chart. In large sections, where considerable time could be spent calling the roll, this might be the most economical way to take attendance. These charts can then be used informally to note questioning patterns and which students are volunteering answers. The research shows that in interactions with postsecondary and adult students teachers call on or make eye contact with males more frequently than females (Hall & Sandler, 1982). It has also been demonstrated that most teachers tend to ask questions of the students in the front row and those located in the center of the classroom. This has been described as the power T. Keeping an informal chart of responses can minimize both situations.

Finally, to prevent the loss of loaned personal texts and class related materials, it is helpful to create some means of recording who has borrowed what materials. In the heat of the moment, many items are loaned with both the teacher and the student confident that they will be returned. Unfortunately, without some system for tracking these materials too often they are forgotten until it is too late for them to be recovered.

Conclusion

As was pointed out at the beginning of this section, good planning is essential for effective teaching. The time spent creating a workable course plan will pay great dividends throughout the semester. Planning, like every teaching skill, becomes easier with use. It is hoped that the information provided here will prove useful in creating accurate, effective course plans which benefit both the teacher and the students.

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